

## DETAILED ACTION

### *Examiner's Amendment*

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Eric Replogle on 12/02/08. The substance of the interview can be found in the attached Examiner-Initiated interview summary form.

The application has been amended as follows:

#### *In the Claims:*

1. *(Canceled)*

2-9. *(Previously Presented)*

10. *(Canceled)*

11-14. *(Previously Presented)*

15. *(Canceled)*

16-21. *(Previously Presented)*

22. *(Canceled)*

23. *(Currently Amended)* *An apparatus for use in a memory architecture comprising:*

*means for preparing a full frame of color data for display, wherein ~~is~~ said means for preparing includes memory; and*

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*a sole means for controlling use of a main memory between the means for preparing and a processing unit, for partitioning an address space in the main memory and a separate physical device that represents a color buffer into first and second logical buffers, for designating the first logical buffer as a refresh memory and the second logical buffer as a frame-preparation memory, for writing the color data into the frame-preparation memory at a frame rate, for copying the color data from the frame-preparation memory to the refresh memory, the frame-preparation memory having a bandwidth that supports the refresh rate, and for reading the color data from the refresh memory at a rate that supports a refresh rate of a display device, wherein the means for controlling further maps the address space for the frame-preparation memory onto a physical device for the main memory and the address space for the refresh memory onto the physical memory device for a dedicated memory separate from the physical memory device for the main memory.*

24-26. (Previously Presented)

### ***Response to Arguments***

2. Applicant's arguments, see page 9 of Applicant's Remarks, filed 10/17/08, with respect to 35 USC 101 rejection of claims 23-26 have been fully considered and are persuasive. The 35 USC 101 rejection of claims 23-26 has been withdrawn since amendments to claim 23 overcome the rejection as the language now positively recites the apparatus as a physical hardware implemented apparatus. Note, as per all other claims, all other claims are seen as statutory as they provide a) a method that is tied to a statutory class (see claims 2-9 and 11-14, the method being tied to a main memory in a

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computer) and b) a computer system or apparatus which falls into one of the statutory classes of invention and is further described as a physical thing (machine) (see computer system and its elements in claims 16-21).

***Allowable Subject Matter***

3. Claims 2-9, 11-14, 16-21 and 23-26 are allowed.

The following is an examiner's statement of reasons for allowance:

In reference to claims 2, 11, 16 and 23, the prior art of record does not explicitly disclose a memory architecture, a method of decoupling a color buffer, a computer system and apparatus comprising a single memory controller/sole means for controlling memory that connects two logical buffers, one to a graphics subsystem and another to a display device so that a full frame of color data is written into one of the buffers at a frame rate and read from the other buffer at a rate that supports a refresh rate of the display, whereby the first buffer also has bandwidth that supports the refresh rate and wherein the first buffer is mapped into main memory and the address space of the second buffer is mapped into a physical memory device that is separate from the main memory, in combination with the further limitations of claims 2, 11, 16 and 23 respectively.

In reference to claims 3-9, 12-14, 17-21 and 24-26, such claims depend upon allowable claims 2, 11, 16 and 23 and are therefore also inherently allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***References Cited***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:
- a. Sturges (U.S. Patent 6,222,564)
    - i. Sturges discloses a method and apparatus for managing access to a shared system memory accessible by both a memory controller and a graphics controller.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (571) 272-7781. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung, can be reached at (571) 272-7794.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**571-273-8300 (Central Fax)**

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (571) 272-2600.

/Antonio A Caschera/

Examiner, Art Unit 2628

Temporary Full Signatory Authority

**12/13/08**